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BID WILL BE OPENED Tuesday, March 18, 2014 at 2:00 PM and may not be withdrawn within 45 days after such date, and time. Questions will be entertained through the close of business March 12, 2014.

BID NO. ITB14MB-136

UNIVERSITY MAILING DATE: 03/06/2014

PURCHASING AGENT MB/DF

BID TITLE: Fifield Hall Chiller Equipment Replacement

VENDOR NAME

VENDOR MAILING ADDRESS

REASON FOR NOT SUBMITTING BID

CITY - STATE - ZIP CODE

AREA CODE TELEPHONE NO.

FAX NO.

WEB ADDRESS

EMAIL ADDRESS

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a bid for the same materials, supplies, or equipment and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the vendor and that the vendor is in compliance with all the requirements of the Invitation to Bid, including but not limited to, certification requirements. In submitting a bid on behalf of the Board of Trustees, hereinafter known as the University, the vendor offers and agrees that if the bid is accepted the vendor will convey, sell, assign, or transfer to the University all rights, title and interest in and to all causes of action it may now or hereafter acquire under the Anti-trust laws of the United States and the University for price fixing relating to the particular commodities or services purchased or acquired by the University. At the University's discretion, such assignment shall be made and become effective at the time the purchasing agency tenders final payment to the vendor.

AUTHORIZED SIGNATURE (MANUAL)

NAME AND TITLE (TYPED)

SEaled Bids: All bid sheets and this form must be executed and submitted in a sealed envelope. (DO NOT INCLUDE MORE THAN ONE BID PER ENVELOPE.) The face of the envelope shall contain, in addition to the above address, the date, and time of the bid opening and the bid number. Bids not submitted on the attached bid form shall be rejected. All bids are subject to the conditions specified herein. Those which do not comply with these conditions are subject to rejection.

1. EXECUTION OF BID: Bid must contain an original manual signature of authorized representative in the space provided above. Bid must be typed or printed in ink. Use of erasable ink is not permitted. All corrections to prices made by vendor must be initialed.

2. NO BID: If not submitting a bid, respond by returning only this vendor acknowledgment form, marking it “NO BID”, and explain the reason in the space provided above. Failure to respond to a procurement solicitation without giving justifiable reason for such failure, nonconformance to contract conditions, or other pertinent factors deemed reasonable and valid shall be cause for removal of the supplier’s name from the bid mailing list. NOTE: To qualify as a respondent, vendor must submit a “NO BID”, and it must be received no later than the stated bid opening date and hour.

3. BID OPENING: Shall be public, on the date, location and the time specified on the bid form. It is the vendor’s responsibility to assure that the bid is delivered at the proper time and place of the bid opening. Bids which for any reason are not so delivered will not be considered. A bid may not be altered after opening of the bids.

4. PRICES, TERMS AND PAYMENT: Firm prices shall be bid and will include all packing, handling, shipping charges, and delivery to the destination shown herein.

(a) TAXES: The University does not pay Federal Excise and Sales taxes on direct purchases of tangible personal property or services. The Florida Tax Exempt Number is 11-06-024056-57TC. This exemption does not apply to purchases of tangible personal property or services made by vendors who use the tangible personal property or services in the performance of contracts for the improvement of University-owned real property as defined in Chapter 192, F.S. For paid contracts of $500,000 or above, the University may require an unterschied of the cost of the services and materials.

(b) DISCOUNTS: Vendors are encouraged to reflect trade discounts in the unit prices quoted; however, vendors may offer a discount for prompt payment. Prompt payment discounts will not be considered in the bid award. However, every effort will be made to take the discount within the time offered.

(c) MISTAKES: Vendors are expected to examine the specifications, delivery schedule, bid prices, extensions, and all instructions pertaining to supplies and services. Failure to do so will be at the vendor’s risk. In case of a mistake in extensions the unit price will govern.

(d) INVOICING AND PAYMENT: Payment will be made by the University of Florida after the items awarded to a vendor have been received, inspected, and found to comply with award specifications, free of damage or defect and properly invoiced. All invoices shall bear the purchase order number. Payment for partial shipments shall not be made unless specified. An original invoice shall be submitted. Failure to follow these instructions may result in delay in processing invoices for payment. Payment shall be made in accordance with Section 215.422 (1) F.S. VENDOR OMBUDSMAN: The University’s vendor ombudsman, whose duties include acting as an advocate for vendors may be experiencing problems in obtaining payment from the University, may be contacted at 352-392-1241.

(e) ANNUAL APPROPRIATIONS: The University’s performance and obligation to pay under any contract awarded is contingent upon an annual appropriation by the Legislature.

(f) CONDITION AND PACKAGING: It is understood and agreed that any item offered or shipped as a result of this bid shall be a new, current standard production model available at the time of this bid. All containers shall be suitable for storage or shipment, and all prices shall include standard commercial packaging.

(g) SAFETY STANDARDS: Unless otherwise stipulated in the bid, all manufactured items and fabricated assemblies shall comply with applicable requirements of Occupational Safety and Health Act and any standards hereunder.

5. CONFLICT OF INTEREST: The award hereunder is subject to the provisions of Chapter 112, F.S. All vendors must disclose with their bid the name of any officer, director, or agent who is also a vendor for all goods of the University. Further, all vendors must disclose the name of any University employee who owns, directly or indirectly, an interest of five percent (5%) or more in the vendor’s firm or any of its branches.

6. AWARDS: As the best interest of the University may require, the right is reserved to make award(s) by individual item, group of items, all or none or a combination thereof; to reject any and all bids or waive any minor irregularity or technicality in bids received. When it is determined there is no competition to the lowest responsible vendor, evaluation of other bids are not required. Vendors are cautioned to make no assumptions unless their bid has been evaluated as being responsive.
7. INTERPRETATIONS/DISPUTES: Any questions concerning conditions or specifications shall be directed in writing to the Purchasing Department. Inquiries must reference the date of bid opening and bid number. No interpretations shall be considered binding unless written in writing by the University in response to requests in full compliance with this provision.

8. NOTICE OF BID PROTEST BONDING REQUIREMENT: Any person or entity who files an action protesting a decision or an intended decision pertaining to a competitive solicitation shall at the time of filing the formal protest, post with the University a bond payable to the University in an amount of 10% of the difference between the successful protestor’s bid or proposal; 10% of the estimated expenditure during the contract term; $10,000.00; or whichever is less. The bond shall be conditioned upon the payment of all costs which will be paid against the person or entity filing the protest action. In lieu of a bond, the University may accept a cashier’s check, bank official check or money order in the amount of the bond. FAILURE OF THE PROTESTING PERSON OR ENTITY TO FILE THE REQUIRED BOND, CASHIER’S CHECK, BANK OFFICIAL CHECK OR MONEY ORDER AT THE TIME OF THE FILING THE FORMAL PROTEST SHALL RESULT IN DENIAL OF THE PROTEST.

9. GOVERNMENTAL RESTRICTIONS: In the event any governmental restrictions may be imposed which would necessitate alteration of the material, quality, workmanship or performance of the items offered in this bid prior to their delivery, it shall be the responsibility of the successful vendor to notify the purchaser at once, indicating in the acknowledgment of receipt whether or not the alteration is acceptable. In no case shall the right to accept any such alteration, including any price adjustments occasioned thereby, or to cancel the contract at no expense to the University.

10. LEGAL REQUIREMENTS: Applicable provision of all Federal, State, county and local laws, and of all ordinances, rules and regulations shall govern development, submittal and evaluation of all bids received in response hereto and shall govern all and claims and disputes which may arise between persons submitting a bid response hereto and the University, by and through its officers, employees and agents or any of its authorized representatives, or any other person, natural or otherwise, and lack of knowledge by any vendor shall not constitute a cognizable defense against the legal effect thereof.

11. LOBBYING: Vendor is prohibited from using funds provided under any contract or purchase order for the purpose of lobbying the Legislature or any official, officer, commissioner, member of the executive council, authority, commission, or department of the executive branch or the judicial branch of state government.

12. ADVERTISING: In submitting a bid, the vendor agrees not to use the results therefrom as a part of any commercial advertising. Vendor may not use the names, logos, or trademarks of the University, its employees, or affiliates without the prior written consent of the University.

13. ASSIGNMENT: Any contract or purchase order issued pursuant to this Invitation to Bid and the monies which may become due hereunder are not assignable except with the prior written consent of the University.

14. LIABILITY: The vendor agrees to indemnify and save the University of Florida, the State of Florida and the Florida Board of Governors, their officers, agents, and employees harmless from and all losses, damages, costs and expenses, including attorney's fees, and also all claims on account of damages to property, including loss of use thereof, or bodily injury (including death) which may be hereafter sustained by the vendor, its employees, its subcontractors, or the University of Florida, the State of Florida and the Florida Board of Governors, their officers, agents, or employees, or third persons, arising out of or in connection with any contract awarded and which are a result of the vendor’s negligence or willful misconduct. Such item(s) or materials delivered not conforming to specifications may be rejected and returned at vendor’s expense. Items and items not delivered as per delivery data in bid and/or purchase order may result in vendor being found in default in which event any and all reprocurement costs may be charged against the defaulting vendor. Any violation of these conditions may also result in the vendor’s name being removed from the University of Florida’s vendor file.

15. FACILITIES: The University reserves the right to inspect the vendor’s facilities at any time with prior notice.

16. ADDITIONAL QUANTITIES: For a period not exceeding ninety (90) days from the date of acceptance of any offer by the University of Florida, the right is reserved to acquire additional quantities up to but not exceeding those shown on bid or the bid level at the prices bid in this invitation. If additional quantities are not acceptable, the bid sheets must be noted “BID IS FOR SPECIFIED QUANTITY ONLY.”

17. SERVICE AND WARRANTY: Unless otherwise specified, the vendor shall define any warranty service and replacements that will be provided during and subsequent to this contract. Vendors must explain on an attached sheet to what extent warranty and service facilities are provided.

18. SAMPLES: Samples of items, when called for, must be furnished free of expense, on or before bid opening time and date, and if not destroyed, may upon request, be returned at the vendor’s expense. Each individual sample must be labeled with vendor’s name, manufacturer’s brand name and number, bid number and item reference. Request for return of samples shall be accompanied by instructions which include shipping authorization and name of carrier and must be received with the bid. In instructions are not received within this time, the commodities shall be disposed of by the University.

19. INSPECTION, ACCEPTANCE AND TITLE: Inspection and acceptance will be at discretion of the University, unless loss or damage results from negligence by the University. The contract supplier shall be responsible for loss or damage due to any cause other than University. In case said shall be the responsibility of the contract supplier until accepted by the University, unless loss or damage results from negligence by the University. The contract supplier shall be responsible for filing any and all claims.

(a) Record any evidence of visible damage on all copies of the delivering carrier's Bill of Lading.
(b) Report damage (Visible or Concealed) to the carrier and contract supplier immediately upon receipt with written in writing by the University in response to requests in full compliance with this provision.

20. PATENTS, COPYRIGHTS, TRADEMARKS, ROYALTIES AND OTHER Intellectual Properties: If any work in the performance of the contract, including any derivative works, is subject to any patent, copyright or other trade secret, the University reserves the right to determine acceptance of item(s) as an approved equivalent. The University reserves the right to make changes in the specifications and/or contract terms and conditions and not be made until return is made.

21. CONFLICT BETWEEN DOCUMENTS: If any terms and conditions contained within the documents that are a part of this ITB or resulting contract are in conflict with any other terms and conditions contained therein, then the various documents comprising this ITB or resulting contract, as applicable, shall govern in the following order of precedence: change order, purchase order, addenda, special conditions, general conditions, specifications, departmental description of work, and bid.

22. MANUFACTURERS' NAMES AND APPROVED EQUIVALENTS: Any manufacturer’s names, trade names, brand names, information and/or catalog numbers listed in a specification are for information and not intended to limit competition. If bids are based on equivalent products, indicate on the bid the manufacturer’s name, trade name, or brand name and/or descriptive literature, and/or complete specifications. Reference to literature submitted with a previous bid will not satisfy this provision. The vendor shall also explain in detail the reasons why the item supplied meets the specifications and not be considered an equivalent thereto. The University of Florida reserves the right to determine acceptance of item(s) as an approved equivalent. Bids which do not comply with the requirements or requirements are subject to rejection. Bids lacking any written indication of intent to quote an alternate brand will be received and considered in complete compliance with the specifications as listed on the bid form.

23. NONCONFORMANCE TO CONTRACT CONDITIONS: Items may be tested and/or inspected for compliance with specifications by any appropriate testing facilities. Should the University require the vendor to reimburse the University for costs incurred by the University in connection with the examination or testing, the data derived from any tests for compliance with specifications are public records and open to examination thereto in accordance with Chapter 119, Florida Statutes. Items delivered not conforming to specifications may be rejected and returned at vendor’s expense. Any violation of these conditions may also result in the vendor’s name being removed from the University of Florida’s vendor file.

24. PUBLIC RECORDS: Any material submitted in response to this Invitation to Bid will become a public document pursuant to Section 119.07 F.S. This includes material which the responding vendor might consider to be confidential or a trade secret. Any claim of confidentiality is waived upon submission, effective after opening pursuant to Section 119.07 F.S.

25. DELIVERY: Unless actual date of delivery is specified (or if specified delivery cannot be met), show number of days required to make delivery after receipt of purchase order in space provided. Delivery time may become a basis for making an award (see Special Conditions). Delivery shall be within the normal working hours of the University of Florida, Monday through Friday, unless otherwise specified.

26. PUBLIC PRINTING - PREFERENCE GIVEN PRINTING WITHIN THE STATE: The University of Florida shall give preference to vendors located within the state when awarding contracts to have materials printed, whenever such printing can be done at no greater expense than, and at a level of quality comparable to, that obtainable from a vendor located outside of the state.

(a) CONTRACTS NOT TO BE SUBLETTED: In accordance with Code B Printing Laws and Regulations “Printing shall be awarded only to printing firms. No contract shall be awarded to any broker, agent, or independent contractor offering printing manufactured by firms or organizations.

(b) DISQUALIFICATION OF VENDOR: Reasonable grounds for believing that a vendor is involved in more than one bid for the same work will cause for rejection of all bids in which such vendors are believed to be involved. Any or all bids will be rejected if there is reason to believe that collusion exists between vendors. Bids in which the prices obviously are unbalanced will be subject to rejection. These provisions are believed to be involved.

(c) TRADE CUSTOMS: The printing industry are recognized unless accepted by Special Conditions or Specifications herein.

(d) COMMUNICATIONS: It is expected that all materials and proofs will be picked up and delivered by the printer or his representative, unless otherwise specified. Upon request, materials will be forwarded by registered mail.

(e) RETURN OF MATERIAL: All copy, photos, artwork, and other materials supplied by the University of Florida must be handled carefully and returned in good condition upon completion of the job. Such return is a condition of the contract and payment will not be made until return is affected.

END OF SECTION

NOTE: ANY AND ALL SPECIAL CONDITIONS AND SPECIFICATIONS ATTACHED HERETO WHICH VARY FROM THE GENERAL CONDITIONS SHALL HAVE PRECEDENCE.
SPECIAL CONDITIONS

AWARD - Award will be made on an "All-or-None Offer Total Offer" basis. Any contract awarded pursuant to this Bid/RFP will be awarded to the single best bidder/proposer or to none at all.

CANCELLATION - Orders or contracts resulting from the bid award will be subject to immediate cancellation if either the product or the service does not comply with the bid specifications.

CANCELLATION - For the protection of both parties, this contract may be canceled in whole, or in part, by either party by giving 30 days prior notice in writing to the other party.

AVAILABILITY OF FUNDS - The State of Florida's and the University’s performance and obligation to pay under this contract is contingent upon an annual appropriation by the Legislature of the State of Florida.

F.O.B. POINT - The F.O.B. point shall be bldg. 716, 2550 Hull Road University of Florida, Gainesville, Florida 32611. Point of contact for coordination of delivery shall be Adam Boudreaux, Assistant Director, IFAS FPO at (352) 575-8822 or his designate.

QUALIFICATIONS OF BIDDERS - This bid will be awarded only to a responsible bidder capable of meeting the terms and conditions included in the specifications included in the attached bid documents.

WARRANTY - The successful bidder shall furnish factory warranty on all equipment furnished against defect in material and/or workmanship. The factory warranty shall become effective on the date of startup and commissioning by the University / contractors. Should any defect in material or workmanship, excepting ordinary wear and tear, appear during the above stated warranty period, the successful bidder shall repair or replace same at no cost to the University immediately upon written notice from University Purchasing. The successful bidder will not be liable under the above warranty for any defects or damages resulting from unforeseeable causes beyond the control and without the fault or neglect by the University, acts of God, fires, floods, and hurricanes.

INVITATION TO BID FORM - All bids should be submitted on the University of Florida Invitation to Bid/Bidders Acknowledgment form with one (1) complete original bid and one (1) complete photocopy in a sealed envelope, with the
following information on the outside of the envelope: bid number, date and time of bid opening, and Company name in order to be considered in the award.

MAINTENANCE AND INSTRUCTION MANUALS - The successful bidder shall include at least one copy of an instruction manual with each unit supplied. This manual shall include at least a minimum of operating instructions, maintenance and repair information, including schematic diagrams and a list of available replacement parts.

EQUAL OPPORTUNITY STATEMENT - The State Universities have established equal opportunity practices which conform to both the spirit and the letter of all laws against discrimination and prohibits discrimination based on race, creed, color, sex, age, national origin, marital status or religion. To be considered for inclusion as a supplier under this agreement, the proposer commits to the following:

1. The provisions of Executive Order 11246, September 24, 1966, and the rules, regulations and relevant orders of the Secretary of Labor are applicable to each order placed against this agreement regardless of value.
2. If the proposer expects to receive $10,000 in orders during the first 12 months of this agreement, a complete certificate of non-segregated facilities shall be attached to the proposal response.
3. If the proposer expects to receive $50,000 in orders during the first 12 months of this agreement and employs more than 50 people, standard form 100 (EEOO-1) must be filed prior to March 1 of each year.
4. If the proposer expects to receive $50,000 in orders during the first 12 months and employs more than 50 people, a written program for affirmative action compliance must be maintained by the proposer, subject to review upon request by the user agencies of this agreement.

If you have already complied with the above, please indicate ___

INQUIRIES - The University will not give verbal answers to inquiries regarding the specifications, or verbal instructions prior to or after the award of the bid. A verbal statement regarding same by any person shall be non-binding. The University is not liable for any increased costs resulting from the Bidder accepting verbal direction. All changes, if necessary, shall be made by written addendum to the bid.

Any explanation desired by Vendors must be requested of the University of Florida Purchasing and Disbursement Services in writing, and if an explanation is necessary, a reply shall be made in the form of an addendum, a copy of which will be forwarded to each Vendor who has received a set of the bid documents from the University. Vendors obtaining bid documents from any other source
must notify the University of their name, address, telephone, and facsimile numbers in order to receive any addenda. Questions will be entertained through close of business March 12, 2014. Direct all inquiries to Mercedes Bongiovanni @ mbongio@ufl.edu.

**CONTRACTOR'S LIABILITY INSURANCE** - The Contractor shall purchase from and maintain with a company or companies lawfully authorized to do business in Florida such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. All insurance policies shall be issued and countersigned by representatives of such companies duly authorized for the State of Florida and shall be written on ISO standard forms or their equivalents. The Contractor shall provide the ISO Commercial General Liability policy for general liability coverages. All liability policies shall provide that the University is a named additional insured as to the operations of the Contractor under the University-Contractor Agreement and shall provide the Severability of Insured's Provision. The University shall be exempt from, and in no way liable for, any sums of money which may represent a deductible in any insurance policy. The payment of such deductible shall be the responsibility solely of the Contractor and/or Subcontractor providing such insurance. This insurance shall protect the Contractor from the following claims:

a) Claims under worker's or workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to the work to be performed;
b) Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
c) Claims for damages because of bodily injury, sickness or disease, or death of any person other than the contractor's employees;
d) Claims for damages insured by usual personal injury liability coverage including claims which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person;
e) Claims for damages, other than to the work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
f) Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and

g) Claims involving contractual liability insurance applicable to the Contractor's obligations in the A.I.A. General Conditions.
The required Contractor's Liability Insurance shall be written for limits of not less than $100,000 per person, $300,000 per occurrence. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of work until date of final payment and termination of any coverage required to be maintained after final payment. The required insurance shall include contractual liability insurance applicable to the contractor's obligations in the A.I.A. General Conditions, and coverage for the "XCU" exposure.

Worker's Compensation - The Contractor shall secure and maintain for the life of this Agreement, valid Worker's Compensation Insurance as required by chapter 440, Florida Statutes.

Automobile Liability - The Contractor shall secure and maintain, during the life of this Agreement, Automobile Liability insurance on all vehicles against bodily injury and property damage in at least the amount of $100,000.00 per person, $300,000.00 per occurrence.

Certificates of Insurance - The Contractor shall file with the University Certificates of Insurance acceptable to the University prior to the commencement of work. These Certificates and the insurance policies which are required shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days prior written notice has been given to the University. If any of the foregoing insurance coverages are required to remain in force after final payment an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Subparagraph 9.10.2, A.I.A. General Conditions. The Contractor shall furnish one copy of the Certificate of Insurance which shall be dated and show the name of the insured Contractor, the specific job by name and job number, the name of the insurer, the number of the policy, its effective date, and its termination date.

Property Insurance - The Contractor shall purchase and maintain from a company or companies lawfully authorized to do business in Florida, property insurance, written on a Builder's Risk completed value form, in the amount of the initial contract sum, as well as, subsequent modifications for the entire work at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the contract documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in the A.I.A. General Conditions or until no person or entity other than the University has an insurable interest in the property required to be covered, whichever is earlier. This insurance shall include interests of the University, the Contractor, and Sub-contractors in the work.
Property insurance shall be on a Special Causes of Loss form or its equivalent, including reasonable compensation for Architect/Engineer's services and expenses required as a result of such insured loss. The Contractor shall purchase and maintain the Building Ordinance Endorsement.

If the property insurance provides deductibles the Contractor shall pay costs not covered because of such deductibles.

Before an exposure to loss may occur, the Contractor shall file with the University a copy of each policy that includes the required Property Insurance coverages. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the University.

A loss insured under property insurance shall be adjusted by the University as fiduciary and made payable to the University as fiduciary for the insureds, as their interests may appear. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors in similar manner.

The University as fiduciary shall, upon occurrence of an insured loss, deposit in a separate account proceeds so received, which the University shall distribute in accordance with such agreement as the parties in interest may reach, or in accordance with an award based on a resolution of a matter in dispute, in which case the procedure shall be as provided in the A.I.A. General Conditions. If after such loss no other special agreement is made, replacement of damaged property shall be covered by appropriate Change Order.

PROTECTION OF PROPERTY - The successful bidder shall at all times guard against damage or loss to the property of the University or of other vendors or contractors and shall be held responsible for replacing or repairing any such loss or damage. The University may withhold payment or make such deductions as deemed necessary to insure reimbursement or replacement for loss or damage to property through negligence of the successful bidder or his agents. The contractor shall provide all barricades and take all necessary precautions to protect buildings and personnel.

OSHA REGULATIONS - It is the responsibility of the contractor to insure that ALL OSHA regulations applying to this job are adhered to at all times.

DELIVERY COSTS - All costs for delivery, storage, freight, and packing are to be prepaid by the contractor, FOB, University of Florida or address as listed in the Invitation to Bid.
MATERIAL SAFETY DATA SHEET - In accordance with Chapter 442, Florida Statutes, if this purchase order involves the shipping of any item designated as a toxic substance such shipment must be accompanied by a Material Safety Data Sheet (MSDS). A toxic substance is defined as any chemical substance or mixture in gaseous, liquid or solid state, if such substance appears on the "Florida Substance List" promulgated by the Department of Labor and Employment Security; is manufactured, produced, used, applied or stored in the workplace; and causes a significant risk to safety or health during, or as a proximate result of, any customary or reasonable foreseeable handling or use. The MSDS must be maintained by the user agency and must include the following information:

a) The Chemical name and the common name of the toxic substance.
b) The hazards or other risks in the use of the toxic substance, including:
   1. The potential for fire, explosion, corrosion, and reactivity.
   2. The known acute and chronic health effects of risks from exposure, including the medical conditions which are generally recognized as being aggravated by exposure to the toxic substance; and
   3. The primary routes of entry and symptoms of overexposure.
c) The proper precautions, handling practices, necessary personal protective equipment, and other safety precautions in the use of or exposure to the toxic substances, including appropriate emergency treatment in case of overexposure.
d) The emergency procedure for spills, fire, disposal, and first aid.
e) A description in lay terms of the known specific potential health risks posed by the toxic substance intended to alert any person reading this information.
f) The year and month, if available, that the information was compiled and the name, address, and emergency telephone number of the manufacturer responsible for preparing the information.

Any questions regarding this requirement should be directed to: Department of Labor and Employment Security, Bureau of Industrial Safety and Health, Toxic Waste Information Center, 2551 Executive Center Circle West, Tallahassee, Florida 32301-5014, Telephone: 1-800-367-4378.

PRISON REHABILITATIVE INDUSTRIES - It is expressly understood and agreed that any articles which are the subject of, or required to carry out this contract shall be purchased from Pride of Florida in the same manner and under the procedures set forth in Section 946.515 (2), (4), Florida Statutes; and for purposes of this contract the person, firm or other business entity carrying out the provisions of this contract shall be deemed to be substituted for this agency insofar as dealings with such corporation. Contact, Terrie Brooks, Bid Administrator, PRIDE of Florida, 2720 Blair Stone RD, Suite G, Tallahassee, FL 32301.
**BID DELIVERY** - If this bid will be mailed through the U. S. Postal Service as regular mail, address the bid to the PO Box as shown on the Invitation to Bid Acknowledgment Form.

If a company representative plans to attend the bid opening; if the bid will be hand delivered; or if the bid will be delivered by a service other than the U. S. Postal Service regular mail, i.e., Federal Express, Airborne, United Parcel Service, Courier, U. S. Postal Express Mail, etc., address the bid to the Building and room number as shown on the Invitation to Bid Acknowledgment form.

**PUBLIC ENTITY CRIME** - A person or affiliate who has been placed on the convicted vendor list by the Department of Management Services, State of Florida, may not submit a proposal on a contract to provide any goods or services, including construction, repairs, or leases and may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant for the University of Florida for a period of 36 months from the date of being placed on the convicted vendor list, a "person" or "affiliate" includes any natural person or any entity, including predecessor or successor entities or any entity under the control of any natural person who is active in its management and who has been convicted of a public entity crime (Rule 6C1-3.020 FAC).

**FEDERAL DEBARRMENT** - By signing this bid/proposal, the offeror certifies, to the best of its knowledge or belief, that the offeror and its principals are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency; or have not within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them in connection with a public contract or subcontract; or are not criminally or civilly charged by a governmental entity with commission of offenses; or has not within a three year period preceding this offer had a contract terminated for default by any Federal agency. (Federal Acquisition Regulation 52.209-5).

**DISCRIMINATION** - An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor or consultant under contract with any public entity, and may not transact business with any public entity.

**NOTICE TO CONTRACTORS OF ASBESTOS-CONTAINING MATERIALS IN UNIVERSITY BUILDINGS** - Asbestos containing materials (ACM) can be found in almost any building in the United States more than 10 years old. The
University of Florida is no exception. The types of asbestos most commonly found are pipe and boiler insulation, fireproofing, hard panels known as "Transite", floor tile, and spray or trowel-applied ceiling finishes. ACM is generally not hazardous if left undisturbed.

The University has implemented an Asbestos Program to assure safe management and removal of ACM. Contractors, consultants, and other vendors providing service to the University may encounter ACM and must, therefore, comply with the following instructions:

a) Avoid disturbing suspected ACM. Exercise caution and watch for possible ACM.

b) If it is necessary to disturb ACM, first notify the appropriate Division Asbestos Representative listed in this notice, or the University of Florida Asbestos Coordinator, before proceeding with your work. You shall take whatever precautions are necessary to protect humans' health and the environment, and comply with all applicable Federal, State, and Local laws pertaining to asbestos.

c) If you require additional information on possible locations of ACM in a particular building, contact the Asbestos Representative from the Division for which you are working.

<table>
<thead>
<tr>
<th>Division</th>
<th>Asbestos Representative</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Plant</td>
<td>Assoc. Dir. Physical Plant</td>
<td>(352) 392-7793</td>
</tr>
<tr>
<td>Health Center</td>
<td>Asst. Dir. Health Ctr. Physical Plant</td>
<td>(352) 392-4417</td>
</tr>
<tr>
<td>Housing</td>
<td>Asst. Dir. of Housing Maint. Serv.</td>
<td>(352) 392-2161</td>
</tr>
<tr>
<td>Reitz Union</td>
<td>Maintenance Superintendent</td>
<td>(352) 392-1614</td>
</tr>
<tr>
<td>IFAS</td>
<td>Engineer</td>
<td>(352) 392-6488</td>
</tr>
</tbody>
</table>

SMALL BUSINESS PROGRAM - University is an equal opportunity institution and, as such, encourages the use of small businesses, including women and minority-owned small businesses in the provision of goods and services. Small businesses should have a fair and equal opportunity to compete for dollars spent by the University. Competition ensures that prices are competitive and a broad vendor base is available. Vendor shall use good faith efforts to ensure opportunities are available to small businesses, including women and minority-owned businesses. For questions about the University’s Small Business Program contact Faylene Welcome, Director of Small Business and Vendor Diversity, 352-392-0380.
AMERICANS WITH DISABILITY ACT - If special accommodations are needed in order to attend a bid opening, contact Mercedes Bongiovanni or email at mbongio@ufl.edu, three business days prior to bid opening.

NOTICE TO CONTRACTOR - The University shall consider the employment by any contractor of unauthorized aliens a violation of section 274A(e) of the Immigration and Nationality Act. Such violation shall be cause for unilateral cancellation of this contract.

USE OF TERMS: - The terms University of Florida, University, and IFAS Facilities Operations, Owner, Architect/Engineer are used synonymously in this Invitation to Bid unless otherwise indicated. The terms vendor, proposer and contractor are used synonymously in this ITB unless otherwise indicated.

ERRORS – The University is not liable for any errors or misinterpretations made by the bidder in responding to this Invitation to bid.

VENDOR’S EXPENSE - All bids submitted in response to the ITB must be submitted at the sole expense of the Vendor, whether or not any agreement is signed as a result of this Invitation to Bid. Bidders will pay all costs associated with the preparation of proposals and necessary visits to campus and other required site visits.

CONTRACTOR SHALL IMPLEMENT - a drug-free workplace program in accordance with the requirements of Section 440.102, Florida Statutes.

TOBACCO-FREE CAMPUS POLICY - As of July 1, 2010 the University of Florida campus has been tobacco-free. The use of cigarettes or other tobacco products in UF buildings, parking lots, or in vehicles in these areas is prohibited. The successful vendor is expected to respect this smoke free policy and fully comply with it.

FLORIDA PREFERENCE – Preference for Florida Based Vendors for Purchases of Personal Property in accordance with §.287.084, Florida Statute; a preference shall be provided to vendors with a principal place of business in Florida. If the lowest responsible and responsive bid for personal property is from a vendor whose principal place of business is outside of Florida and is in a state or political subdivision thereof that grants a preference for the same purchase of personal property to a vendor in such state or political subdivision, as applicable, then the University shall grant the same preference to the Florida based vendor with the lowest responsible and responsive bid received pursuant to this Invitation to Bid.
If the lowest responsible and responsive bid is from a vendor whose principal place of business is in a state that does not grant a preference for the purchase of personal property to a vendor in such state, then the University shall grant a preference in the amount of 5 percent to the lowest and responsive Florida base vendor.

For vendors whose principal place of business is outside of Florida, such vendors must, at the time of submitting its bid, provide a written opinion from a licensed attorney in its state specifying (a) the preference(s) granted by the state or political subdivision and (b) how the preference(s) is/are calculated.

The attached Attestation of Principal Place of Business must be completed and returned with your ITB response.
IFAS Fifield Hall Chiller Replacement
IFAS Project No. 14072

for
IFAS Facilities Operations
P.O. Box 110850
Building 124, Mowry Road
Gainesville, Florida 32611

CHILLER EQUIPMENT BID PACKAGE
March 3, 2014

Moses & Associates, Inc.
2209 NW 40th Terrace, Suite A
Gainesville, FL 32605
FL License EB-0003097
M&A Project No: 14001
# TABLE OF CONTENTS – COMMISSIONING DOCUMENTS

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IFAS
Fifield Hall Chiller Replacement
IFAS Project No. 14072

BEST VALUE WORKSHEET

The Owner intends to direct purchase the chiller specified and scheduled herein with the goal of “Best Value” considering first cost, temporary rental chiller cost avoidance, and operating costs. The award will be made based on the lowest total cost/Best Value Cost (A+B+C):

A. **Chiller Cost:** This is your bid, including freight, and all work described herein. The bid price shall include factory startup per Section 15529, paragraph 3.5 and the 5 year parts and labor warranty per Section 15529, paragraph 2.5.3. Do not include sales tax. This is your traditional bid price. $___________

B. **Rental Cost Factor:** The Owner will be paying $3,500/week for a rental chiller. Submittals must be made within one week of contract award. State the number of weeks you guarantee chiller delivery to the jobsite after receipt of approved submittals. Any portion of a week counts as a week. Figure this cost as follows:

_________ weeks for delivery to site x $3,500/week $___________

C. **Operating Cost:** Bids not meeting the minimum efficiency specified will be considered non-responsive. However, the Owner will also consider the value of better efficiencies. Submit performance data, including part load performance, with your bid. Use the indicated entering condenser water temperature for all calculations. Use 45°F chilled water supply temperature and scheduled nominal evaporator and condenser water flow rates. Calculate your 10 year operating cost as follows:

\[
\text{Capacity} \times \frac{\text{kW/ton (@85°F CWS)}}{} \times 3,504 \text{ hrs} \times \frac{\text{ton}}{} \times \frac{\text{kWh}}{} \times 7.024
\]

- 450T (100%) \times ____ kW/ton (@85°F CWS) \times 3,504 hrs \times $0.10/kWh \times 7.024 = $___________
- 360T (80%) \times ____ kW/ton (@75°F CWS) \times 2,628 hrs \times $0.10/kWh \times 7.024 = $___________
- 270T (60%) \times ____ kW/ton (@65°F CWS) \times 1,752 hrs \times $0.10/kWh \times 7.024 = $___________
- 180T (40%) \times ____ kW/ton (@55°F CWS) \times 876 hrs \times $0.10/kWh \times 7.024 = $___________

Best Value Cost = $A + $B + $C = $___________
TAB 2
SECTION 15005/MECHANICAL GENERAL

1 GENERAL

1.1 The work covered by this division consists of providing all labor, equipment and materials and performing all operations necessary for the installation of the mechanical work as herein called for and shown on the drawings.

1.2 Related Documents:

1.2.1 This is a Basic Mechanical Requirements Section. Provisions of this section apply to work of all Division 15 sections.

1.2.2 Review all other contract documents to be aware of conditions affecting work herein.

1.2.3 Definitions:

1.2.3.1 Provide: Furnish and install, complete and ready for intended use.

1.2.3.2 Furnish: Supply and deliver to project site, ready for subsequent requirements.

1.2.3.3 Install: Operations at project site, including unpacking, disassembly, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar requirements.

1.3 Permits and Fees: Contractor shall obtain all necessary permits, meters, and inspections required for his work and pay all fees and charges incidental thereto.

1.4 Verification of Owner's Data: Prior to commencing any work the Contractor shall satisfy himself as to the accuracy of all data as indicated in these plans and specifications and/or as provided by the Owner. Should the Contractor discover any inaccuracies, errors, or omissions in the data, he shall immediately notify the Architect/Engineer in order that proper adjustments can be anticipated and ordered. Commencement by the Contractor of any work shall be held as an acceptance of the data by him after which time the Contractor has no claim against the Owner resulting from alleged errors, omissions or inaccuracies of the said data.

1.5 Delivery and Storage of Materials: Materials delivered to site shall be inspected for damage, unloaded, and stored with a minimum of handling. All material shall be stored to provide protection from the weather and accidental damage.

1.6 Extent of work is indicated by the drawings, schedules, and the requirements of the specifications. Singular references shall not be constructed as requiring only one device if multiple devices are shown on the drawings or are required for proper system operation.

1.7 Field Measurements and Coordination:

1.7.1 The intent of the drawings and specifications is to obtain a complete and satisfactory installation. Separate divisional drawings and specifications shall not relieve the Contractor from full compliance of work indicated on any of the drawings or in any section of the specifications.
1.7.2 Verify all field dimensions and locations of equipment to insure close, neat fit with other trades' work. Make use of all contract documents and approved shop drawings to verify exact dimension and locations.

1.7.3 Coordinate work in this division in proper sequence to insure that the total work is completed within contract time schedule and with a minimum cutting and patching.

1.7.4 Locate all apparatus symmetrical with architectural elements. Install to exact height and locations when shown on architectural drawings. When locations are shown only on mechanical drawings, be guided by architectural details and conditions existing at job and correlate this work with that of others.

1.7.5 Install work as required to fit structure, avoid obstructions, and retain clearance, headroom, openings and passageways. Cut no structural members without written approval.

1.7.6 Carefully examine any existing conditions, piping, and premises. Compare drawings with existing conditions. Report any observed discrepancies. It shall be the Contractor's responsibility to properly coordinate the work and to identify problems in a timely manner. Written instructions will be issued to resolve discrepancies.

1.7.7 Because of the small scale of the drawings, it is not possible to indicate all offsets and fittings or to locate every accessory. Drawings are essentially diagrammatic. Study carefully the sizes and locations of structural members, wall and partition locations, trusses, and room dimensions and take actual measurements on the job. Locate piping, ductwork, equipment and accessories with sufficient space for installing and servicing. Contractor is responsible for accuracy of his measurements and for coordination with all trades. Contractor shall not order materials or perform work without such verification. No extra compensation will be allowed because field measurements vary from the dimensions on the drawings. If field measurements show that equipment or piping will not fit, the Architect/Engineer shall be consulted. Remove and relocate, without additional compensation, any item that is installed and is later found to encroach on space assigned to another use.

1.8 Guarantee:

1.8.1 The Contractor shall guarantee labor, materials and equipment for a period of one (1) year from Substantial Completion, or from Owner's occupancy, whichever is earlier. Contractor shall make good any defects and shall include all necessary adjustments to and replacement of defective items without expense to the Owner.

1.8.2 Owner reserves right to make emergency repairs as required to keep equipment in operation without voiding Contractor's Guarantee Bond nor relieving Contractor of his responsibilities during guarantee period.

1.9 Approval Submittals:

1.9.1 When approved, the submittal control log and submittals shall be an addition to the specifications herewith, and shall be of equal force in that no deviation will be permitted except with the approval of the Architect/Engineer.
1.9.1.1 Shop drawings, product literature, and other approval submittals will only be reviewed if they are submitted in full accordance with the General and Supplementary Conditions and Division 1 Specification sections and the following.

1.9.1.1.1 Submittals shall be properly organized in accordance with the approved submittal control log.

1.9.1.1.2 Submittals shall not include items from more than one specification section in the same submittal package unless approved in the submittal control log.

1.9.1.1.3 Submittals shall be properly identified by a cover sheet showing the project name, Architect and Engineer names, submittal control number, specification section, a list of products or item names with model numbers in the order they appear in the package, and spaces for approval stamps. A sample cover sheet is included at the end of this section.

1.9.1.1.4 Submittals shall have been reviewed and approved by the General Contractor (or Prime Contractor). Evidence of this review and approval shall be an "Approved" stamp with a signature and date on the cover sheet.

1.9.1.1.5 Submittals that include a series of fixtures or devices (such as plumbing fixtures or valves) shall be organized by the fixture number or valve type and be marked accordingly. Each fixture must include all items associated with that fixture regardless of whether or not those items are used on other fixtures.

1.9.1.1.6 The electrical design shown on the drawings supports the mechanical equipment basis of design specifications at the time of design. If mechanical equipment is submitted with different electrical requirements, it is the responsibility of the Contractor to resolve all required electrical design changes (wire and conduit size, type of disconnect or overload protection, point(s) of connection, etc.) and clearly show the new electrical design on the mechanical submittal with a written statement that this change will be provided at no additional cost. Mechanical submittals made with no written reference to the electrical design will be presumed to work with the electrical design. Any corrections required will be at no additional cost.

1.9.2 If the shop drawings show variation from the requirements of contract because of standard shop practice or other reasons, the Contractor shall make specific mention of such variation in writing in his letter of transmittal and on the submittal cover sheet in order that, if acceptable, Contractor will not be relieved of the responsibility for executing the work in accordance with the contract.

1.9.3 Review of shop drawings, product literature, catalog data, or schedules shall not relieve the Contractor from responsibility for deviations from contract drawings or specifications, unless he has in writing called to the attention of the Architect/Engineer each such deviation in writing at the time of submission, nor shall it relieve him from responsibility for errors of any sort in shop drawings, product literature, catalog data, or schedules. Any feature or function specified but not mentioned in the submittal shall be assumed to be included per the specification.

1.9.4 Submit shop drawings as called for in other sections after award of the contract and before any material is ordered or fabricated. Shop drawings shall consist of plans, sections, elevations and details to scale (not smaller than ¼” per foot), with dimensions clearly showing the installation. Direct copies of small scale project drawings issued to the Contractor are not acceptable.
Drawings shall take into account equipment furnished under other sections and shall show space allotted for it. Include construction details and materials.

1.10 **Test Reports and Verification Submittals:** Submit test reports, certifications and verification letters as called for in other sections. Contractor shall coordinate the required testing and documentation of system performance such that sufficient time exists to prepare the reports, submit the reports, review the reports and take corrective action within the scheduled contract time.

1.11 **O&M Data Submittals:** Submit Operation and Maintenance data as called for in other sections. When a copy of approval submittals is included in the O&M Manual, only the final “Approved” or “Approved as Noted” copy shall be used. Contractor shall organize these data in the O&M Manuals tabbed by specification number. Prepare O&M Manuals as required by Division 1 and as described herein. Submit O&M Manuals on CD-ROM in addition to required hard bound copies. Submit manuals at the Substantial Completion inspection.

**2 PRODUCTS**

2.1 All materials shall be new or Owner-supplied reused as shown on the drawings, the best of their respective kinds, suitable for the conditions and duties imposed on them at the building and shall be of reputable manufacturers. The description, characteristics, and requirements of materials to be used shall be in accordance with qualifying conditions established in the following sections.

2.2 **Equipment and Materials:**

2.2.1 Shall be new and the most suitable grade for the purpose intended. Equipment furnished under this division shall be the product of a manufacturer regularly engaged in the manufacture of such items for a period of three years. Where practical, all of the components shall be products of a single manufacturer in order to provide proper coordination and responsibility. Where required, Contractor shall furnish proof of installation of similar units or equipment.

2.2.2 Each item of equipment shall bear a name plate showing the manufacturer's name, trade name, model number, serial number, ratings and other information necessary to fully identify it. This plate shall be permanently mounted in a prominent location and shall not be concealed, insulated or painted.

2.2.3 The label of the approving agency, such as UL, IBR, ASME, ARI, AMCA, by which a standard has been established for the particular item shall be in full view.

2.2.4 The equipment shall be essentially the standard product of a manufacturer regularly engaged in the production of such equipment and shall be a product of the manufacturer's latest design.

2.2.5 A service organization with personnel and spare parts shall be available within two hours for each type of equipment furnished.

2.2.6 Install in accordance with manufacturer's recommendations. Place in service by a factory trained representative where required.
2.2.7 Materials and equipment are specified herein by a single or by multiple manufacturers to indicate quality, material and type of construction desired. Manufacturer's products shown on the drawings have been used as basis for design; it shall be the Contractor's responsibility to ascertain that alternate manufacturer's products, or the particular products of named manufacturers, meet the detailed specifications and that size and arrangement of equipment are suitable for installation.

2.2.8 Model Numbers: Catalog numbers and model numbers indicated in the drawings and specifications are used as a guide in the selection of the equipment and are only listed for the contractor's convenience. The contractor shall determine the actual model numbers for ordering materials in accordance with the written description of each item and with the intent of the drawings and specifications.

2.3 Requests for Substitution:

2.3.1 Where a particular system, product or material is specified by name, consider it as standard basis for bidding, and base proposal on the particular system, product or material specified.

2.3.2 Requests by Contractor for substitution will be considered only when reasonable, timely, fully documented, and qualifying under one or more of the following circumstances.

2.3.2.1 Required product cannot be supplied in time for compliance with Contract time requirements.

2.3.2.2 Required product is not acceptable to governing authority, or determined to be non-compatible, or cannot be properly coordinated, warranted or insured, or has other recognized disability as certified by Contractor.

2.3.2.3 Substantial cost advantage is offered Owner after deducting offsetting disadvantages including delays, additional compensation for redesign, investigation, evaluation and other necessary services and similar considerations.

2.3.3 All requests for substitution shall contain a "Comparison Schedule" and clearly and specifically indicate any and all differences or omissions between the product specified as the basis of design and the product proposed for substitution. Differences shall include but shall not be limited to data as follows for both the specified and substituted products:

- Principal of operation.
- Materials of construction or finishes.
- Thickness of gauge of materials.
- Weight of item.
- Deleted features or items.
- Added features or items.
- Changes in other work caused by the substitution.
- Performance curves.

If the approved substitution contains differences or omissions not specifically called to the attention of the Architect/Engineer, the Owner reserves the right to require equal or similar features to be added to the substituted products (or to have the substituted products replaced) at the Contractor's expense.
EXECUTION

3.1 Workmanship: All materials and equipment shall be installed and completed in a first-class workmanlike manner and in accordance with the best modern methods and practice. Any materials installed which do not present an orderly and reasonably neat and/or workmanlike appearance, or do not allow adequate space for maintenance, shall be removed and replaced when so directed by the Architect/Engineer.

3.2 Coordination:

3.2.1 The Contractor shall be responsible for full coordination of the mechanical systems with shop drawings of the building construction so the proper openings and sleeves or supports are provided for piping, ductwork, or other equipment passing through slabs or walls.

3.2.2 Any additional steel supports required for the installation of any mechanical equipment, piping, or ductwork shall be furnished and installed under the section of the specifications requiring the additional supports.

3.2.3 It shall be the Contractor's responsibility to see that all equipment such as valves, dampers, filters and such other apparatus or equipment that may require maintenance and operation are made easily accessible, regardless of the diagrammatic location shown on the drawings.

3.2.4 All connections to fixtures and equipment shown on the drawings shall be considered diagrammatic unless otherwise indicated by detail. The actual connections shall be made to fully suit the requirements of each case and adequately provide for expansion and servicing.

3.2.5 The Contractor shall protect equipment, material, and fixtures at all times. He shall replace all equipment, material, and fixtures which are damaged as a result of inadequate protection.

3.2.6 Prior to starting and during progress of work, examine work and materials installed by others as they apply to work in this division. Report conditions which will prevent satisfactory installation.

3.2.7 Start of work will be construed as acceptance of suitability of work of others.

3.3 Interruption of Service: Before any equipment is shut down for disconnecting or tie-ins, arrangements shall be made with the Architect/Engineer and this work shall be done at the time best suited to the Owner. This will typically be on weekends and/or holidays and/or after normal working hours. Services shall be restored the same day unless prior arrangements are made. All overtime or premium costs associated with this work shall be included in the base bid.

3.4 Phasing: Provide all required temporary valves, piping, ductwork, equipment and devices as required. Maintain temporary services to areas as required. Remove all temporary material and equipment on completion of work unless Engineer concurs that such material and equipment would be beneficial to the Owner on a permanent basis.

3.5 Cutting and Patching: Contractor shall provide all cutting and patching of all holes, chases, sleeves, and other openings required for installation of equipment furnished and installed under this section. Utilize experienced trades for cutting and patching. Obtain permission from Architect/Engineer before cutting any structural items.
3.6 **Equipment Setting:** Bolt equipment directly to concrete pads or vibration isolators as required, using hot-dipped galvanized anchor bolts, nuts and washers. Level equipment.

3.7 **Painting:** Touch-up factory finishes on equipment located inside and outside shall be done under Division 15. Obtain matched color coatings from the manufacturer and apply as directed. If corrosion is found during inspection on the surface of any equipment, clean, prime, and paint, as required.

3.8 **Clean-up:** Thoroughly clean all exposed parts of apparatus and equipment of cement, plaster, and other materials and remove all oil and grease spots. Repaint or touch up as required to look like new. During progress of work, contractor is to carefully clean up and leave premises and all portions of building free from debris and in a clean and safe condition.

3.9 **Start-up and Operational Test:** Start each item of equipment in strict accordance with the manufacturer's instructions; or where noted under equipment specification, start-up shall be done by a qualified representative of the manufacturer. Alignment, lubrication, safety, and operating control shall be included in start-up check.

3.10 **Record (As Built) Drawings:**

3.10.1 During the progress of the work the Contractor shall record on their field set of drawings the exact location, as installed, of all piping, ductwork, equipment, and other systems which are not installed exactly as shown on the contract drawings. Contractor shall review the record (asbuilt) drawings with the Engineer and the field conditions at every regular job-site meeting. Pay requests will not be processed if record drawings are not accurate and current.

3.10.2 Upon completion of the work, record drawings shall be prepared as described in the General Conditions, Supplementary Conditions, and Division 1 sections.

3.11 **Acceptance:**

3.11.1 **Punch List:** Submit written confirmation that all punch lists have been checked and the required work completed.

3.11.2 **Instructions:** At completion of the work, provide a competent and experienced person who is thoroughly familiar with project, for one day to instruct permanent operating personnel in operation of equipment and control systems. This is in addition to any specific equipment operation and maintenance training.

3.11.3 **Operation and Maintenance Manuals:** Furnish four complete manuals bound in ring binders with Table of Contents, organized, and tabbed by specification section. Manuals shall contain:

- Detailed operating instructions and instructions for making minor adjustments.
- Complete wiring and control diagrams.
- Routine maintenance operations.
- Manufacturer's catalog data, service instructions, and parts lists for each piece of operating equipment.
- Copies of approved submittals.

MECHANICAL GENERAL

REV. 5/11/11

15005.7
Copies of all manufacturer's warranties.
Copies of test reports and verification submittals.

3.11.4 **Record Drawings:** Submit record drawings.

3.11.5 **Test and Balance Report:** Submit four certified copies. The Report shall be submitted for review prior to the Substantial Completion Inspection unless otherwise required by Division 1.

3.11.6 Acceptance will be made on the basis of tests and inspections of job. A representative of firm that performed test and balance work shall be in attendance to assist. Contractor shall furnish necessary mechanics to operate system, make any necessary adjustments and assist with final inspection.
PROJECT NAME
PROJECT NUMBER

This is a sample cover sheet. Use one for each shop drawing.

ARCHITECT/ENGINEER: Moses & Associates, Inc.
CONTRACTOR: XYZ Construction
SUBCONTRACTOR: ABC Mechanical Contractor
SUPPLIER: Jones Supply Co.
MANUFACTURER: Various
DATE: 2/15/95
SECTION: 15545/Hydronic Specialties

1. Vent valves - Hoffman No. 62
2. In-line air separators - Bell & Gossett RL-4
3. Diaphragm type compression tanks - Bell & Gossett B-200
4. Pump suction diffusers - Bell & Gossett ED-3
5. Triple duty valves - Bell & Gossett 3D-4S
6. Shot feeders - J. Woods No. 2
7. Pressure relief valves - Watts No. 6
8. Pressure reducing valves - Bell & Gossett No. 7

END OF SECTION

M&A will list all comments on this sheet and will only stamp approvals on this sheet.

Leave space after each individual item for M&A comments.

General Contractor’s APPROVAL stamp must be on this sheet.
TAB 3
SECTION 15529/WATER-COOLED CHILLERS

1 GENERAL

1.1 Division-15 Basic Mechanical Materials and Methods sections apply to work specified in this section.

1.2 Extent of chiller work required by this section is indicated on schedules and by requirements of this section.

1.3 Refer to other Bid Package for concrete pads, piping, piping specialties, water temperature and pressure gauges, and valves, which are required external to chillers for installation; not work of this section.

1.4 Refer to other Bid Package for field-installed automatic temperature controls required in conjunction with chillers; not work of this section.

1.5 Refer to other Bid Package for electrical wiring work including wires/cables, raceways, and project required electrical devices; not work of this section.

1.6 Codes and Standards:

1.6.1 ARI Compliance: Test and rate rotary chillers in accordance with ARI Std 550.

1.6.2 NEC Compliance: Comply with applicable NEC requirements pertaining to electrical power and control wiring for construction and installation of chillers.

1.6.3 ANSI Compliance: Comply with ANSI B9.1 safety code requirements pertaining to unit construction of chillers.

Stamp cooler with ASME mark when cooler has been successfully tested in accordance with ASME Code. Pressure test cooler for refrigerant working side pressure of not less than 235 psig and water side pressure of not less than 150 psig. Leak test condenser coils at 150 psig and pressure test coils at 450 psig.

1.7 Approval Submittals:

1.7.1 Product Data: Submit manufacturer's technical product data, including rated capacities for chillers indicated, weights (shipping, installed, and operating), furnished specialties and accessories; and rigging, installation, and start-up instructions.

1.7.2 Shop Drawings: Submit manufacturer's assembly-type shop drawings indicating dimensions, weight loadings, required clearances, methods of assembly of components, and location and size of each field-connection.

1.7.3 Provide complete approval submittal with your bid. Submittals that do not comply with specified evaporator passes, condenser passes, or unit mounted electrical requirements will be considered non-responsive.
1.8 Test Report and Verification Submittals:

1.8.1 Startup Report: Submit startup report by factory-trained representative.

1.8.2 Training: Submit letter verifying that Owner training has been received by factory representative.

1.9 O&M Data Submittals:

1.9.1 Wiring Diagrams: Submit manufacturer's electrical requirements for power supply wiring to units. Submit manufacturer's ladder-type wiring diagrams for interlock and control wiring. Clearly differentiate between portions of wiring that are factory-installed and portions to be field-installed.

1.9.2 Maintenance Data: Submit a copy of approval submittals. Submit maintenance data and parts list for each chiller, control, and accessory; including "trouble-shooting" maintenance guide. Include these data in O&M manual.

2 PRODUCTS

2.1 Acceptable Manufacturers: Subject to compliance with requirements, provide chillers of one of the following:

- McQuay
- York
- Trane

2.2 General: Provide factory-assembled and tested packaged water-cooled liquid chillers as indicated, consisting of compressors, evaporator, condensers, thermal expansion valves, and control panels. Provide capacity and electrical characteristics as scheduled.

2.2.1 Specified capacity shall be met without overloading compressor motors when operating at an evaporator scale factor of 0.0001 and a condenser scale factor of 0.00025 at the temperatures scheduled.

2.2.2 Maximum water tube velocity shall be 8 fps.

2.2.3 Unit shall be capable of operation at 120°F ambient.

2.2.4 Unit efficiency shall be as scheduled on the drawings.

2.3 Refrigerant: Provide full operating charge of refrigerant. CFC refrigerants are not allowed.

2.4 Evaporator and Condenser: Provide steel barrel, shell-and-tube design with seamless copper tubes roller expanded into tube sheets. Design, test, and stamp for refrigerant side working pressure of 150 psig minimum, in accordance with ASME Pressure Vessel Code. Insulate low temperature surfaces with 1½" minimum flexible unicellular insulation with maximum K-value of 0.28. Insulation may be field-applied. Provide water drain connection and bulb wells for temperature controller and low-temperature cutout. Provide marine water boxes on condensers and evaporators. Marine water boxes do not need to be hinged.
2.5 **Compressors:** Provide liquid refrigerant or suction gas cooled, continuous duty, centrifugal compressors, either semi-hermetic or hermetic. The compressor shall unload down to 15% for extended operation.

2.5.1 Provide inherent thermal overload protection for all three phases.

2.5.2 Provide suction strainer.

2.5.3 Provide 5 year parts and labor warranty on motor, compressor, and drive assembly.

2.6 **Controls:**

2.6.1 Provide variable speed drive capable of providing continuously variable capacity without surging from 15 percent to 100 percent output. The VFD shall not produce in excess of 5% THD. Provide filtration as required.

2.6.2 Provide a factory mounted control panel to provide automatic shutdown with automatic reset on detection of low evaporator temperature and pressure, high condenser temperature and pressure, high motor temperature, motor overload and phase reversal. In addition, the control panel shall provide automatic shutdown and automatic reset on detection of low voltage, loss of chilled water flow and loss of condenser water flow.

2.6.3 Provide a discharge chilled water temperature controller.

2.6.4 Flow switches or differential pressure switches shall be interlocked into the control circuit to prevent the machines from running if adequate flow is not being served in the condenser or chilled water circuits.

2.6.5 Provide a menu driven display that indicates the operating code, the last diagnostic code, chilled water set point, current limit set point and leaving chilled water temperature. In addition, the control panel shall show entering chilled water temperature and the entering and leaving condenser water temperatures.

2.6.6 Provide BACnet building automation system communication interface (JCI network card) that permits remote chilled water setpoint with 4-20MA or 2-10V dc analog signal and indication of all chiller parameters. Provide dry contacts for start-stop, status, and alarm for each circuit. Coordinate with existing Siemens BAS.

2.6.7 **DEM:** Provide 400 amp digital energy monitor (Siemens 2000 Series).

2.7 **Starter:**

2.7.1 The chiller manufacturer shall provide a unit mounted single point power connection with disconnect switch in NEMA 1 enclosure. Provide variable frequency drives for each compressor.
2.8 Refrigerant Circuit:

2.8.1 Refrigerant valves shall be installed in pipes to and from the condenser to allow pumping the entire refrigerant charge into the condenser for storage while compressor is opened for service or repair. The valves shall be fire rated at 725 psi with a leak rate less than 0.01 ounces per year at 300 psi differential pressure.

2.8.2 Provide relief valve, gauges, and service valves.

2.9 Noise Rating: Manufacturer shall provide sound attenuation to provide a chiller sound level no greater than 84 dba when tested in accordance with ARI Standard 575.

2.10 Performance Test:

2.10.1 Manufacturers shall submit chiller performance data including kW consumption with their bids.

2.10.2 The manufacturer shall conduct a factory performance capacity test at 100/80/60/40 percent of full load at the indicated condenser water supply temperatures for each machine to verify the performance submitted. The test shall be conducted in accordance with ARI Standard 550-88, including use of the instrumentation and procedures set forth in that standard. All performance tests shall be based on the scheduled design conditions with water flows as scheduled and water temperatures adjusted for clean tubes in accordance with ARI Standard 550-88. If water fouling factors are 0.00025, for example, then the entering condenser water temperature shall be adjusted upward 1¼ degree F and the leaving evaporator water shall be adjusted downward 1 degree F during the test to account for the fact that the performance test is being conducted with clean tubes.

2.10.3 The manufacturer has the option of conducting the performance-capacity test either at their factory or by an independent testing firm. If the testing is to be performed by an independent testing firm, the manufacturer is responsible for all associated costs including transportation of the units to the laboratory. Jobsite performance testing is not acceptable.

2.10.4 The manufacturer shall submit a certified test report showing the performance data and ARI 550-88 test parameters.

2.10.5 The equipment is deemed to be acceptable if the tests indicate that the units meet the performance submitted within the tolerance set forth in ARI Standard 550-88.

3 EXECUTION

3.1 Supplier must examine areas and conditions under which chillers are to be installed and notify Contractor in writing of conditions detrimental to proper completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to Installer. The work is to furnish the chiller as described herein. Another contractor will install the chiller.

3.2 General: Supplier shall include the cost of disassembling and reassembling the chiller as required for installing the chiller in the existing location. Installation will be thru an existing rollup door. Under a separate Bid Package, another contractor will unload the chiller and rig the chiller.
moving it to the existing pad. This same contractor (not the chiller supplier) will perform selective removal/replacement of existing piping and equipment to allow for 4'-0" clear width and 8'-0" clear height. It is the chiller supplier’s responsibility to verify that the chiller being provided can be installed thru the available space and to include all chiller disassembly and reassembly cost necessary to accomplish this. Supplier shall visit the site and provide a statement with his bid that confirms the proposed chiller can be installed per these specifications.

3.3 Provide templates for anchor bolt placement in concrete pad. Deliver templates to concrete installer so work by others is not delayed.

3.4 Electrical Wiring: Install electrical devices furnished by manufacturer but not specified to be factory-mounted. Furnish copy of manufacturer's wiring diagram submittal to Electrical Installer.

Verify that electrical wiring installation is in accordance with manufacturer's submittal and installation requirements of Division-16 sections. Do not proceed with equipment start-up until wiring installation is acceptable to manufacturer and equipment installer.

3.5 Provide services of manufacturer's factory-trained service representative for at least two days to start-up chillers. Include in start-up procedures, testing controls, checking all wiring connections, demonstration of compliance with requirements, demonstration of performance, and replacement of damaged or malfunctioning controls and equipment. Submit complete operating logs and service report following chiller startup. Demonstrate proper interface of chiller microprocessors to BAS.

3.6 Provide services of manufacturer's technical representative for one 8-hour day to instruct Owner's personnel in operation and maintenance of chillers. Schedule training with Owner. Provide at least 7-day notice to Contractor and Engineer of training date.

3.7 The chiller supplier shall employ servicemen qualified to repair the chillers and shall have an office and stock parts within 100 miles of the project. All service mechanics must be factory trained with a State of Florida Class A license. Servicemen shall maintain 24 hour per day emergency service.

END OF SECTION
Tab 4
# WATER COOLED CHILLER SCHEDULE - 45 DEG CHWS

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SCHEDULE NOTES:

1. PROVIDE MAGNETIC BEARING FRICTIONLESS CENTRIFUGAL COMPRESSORS
2. VFD CONTROL FOR EACH COMPRESSOR
3. PROVIDE SINGLE POINT POWER WITH INTEGRAL DISCONNECT
4. REQUIRED STABLE OPERATION WITHOUT HOT GAS BYPASS
5. FINAL MODEL IS RESPONSIBILITY OF BIDDER TO MEET REQUIREMENTS
6. PROVIDE ABILITY TO OPERATE BETWEEN 600–1275 GPM
# WATER COOLED CHILLER SCHEDULE - 50 DEG CHWS

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**SCHEDULE NOTES**

1. PROVIDE MAGNETIC BEARING FRICTIONLESS CENTRIFUGAL COMPRESSORS
2. VFD CONTROL FOR EACH COMPRESSOR
3. PROVIDE SINGLE POINT POWER WITH INTEGRAL DISCONNECT
4. REQUIRED STABLE OPERATION WITHOUT HOT GAS BYPASS
5. FINAL MODEL IS RESPONSIBILITY OF BIDDER TO MEET REQUIREMENTS
6. PROVIDE ABILITY TO OPERATE BETWEEN 600-1275 GPM
## WATER COOLED CHILLER SCHEDULE – 55 DEG CHWS

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**EVAPORATOR SECTION**

| WATER TEMP ENT (°F) | 67 |     |     |      |
| WATER TEMP LVC (°F) | 55 |     |     |      |
| NOMINAL WATER FLOW (GPM) | 900 (6) |     |     |      |
| MAXIMUM PRESSURE DROP (FT HD) | 12.2 |     |     |      |
| NUMBER OF PASSES | 2  |     |     |      |
| FOULING FACTOR | 0.00010 |     |     |      |

**CONDENSER SECTION**

| WATER TEMP ENT (°F) | 85 |     |     |      |
| WATER TEMP LVC (°F) | 94.1 |     |     |      |
| WATER FLOW (GPM) | 1350 |     |     |      |
| MAXIMUM PRESSURE DROP (FT HD) | 14.8 |     |     |      |
| FOULING FACTOR | 0.00025 |     |     |      |

**SCHEDULE NOTES**

1. PROVIDE MAGNETIC BEARING FRICTIONLESS CENTRIFUGAL COMPRESSORS
2. VFD CONTROL FOR EACH COMPRESSOR
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